

RECEIVED
CENTRAL FAX CENTER

OCT 10 2006

Remarks

Claims 1-31 and 33-52 are pending in the application. Claim 32 was previously canceled. Claim 35 has been amended. New claims 37-52 have been added. No new matter has been added by virtue of this amendment. Reconsideration of the application in view of this response is requested.

Allowable Subject Matter

Applicant thanks the Examiner for the allowance of claims 1-31, 33, 34, and 36.

Claim Rejections-- 35 U.S.C. § 103

The Examiner rejects claim 35 under 35 U.S.C. § 103(a), as being unpatentable over Baresh. The Examiner states that "Baresh teaches an array of displacement sensors providing displacement measurements (see Baresh FIGS. 1-3, items 26), the sensors including a coil, a captive core, and a bearing for supporting the core (note coils 82, core 80 and bearing shown but not identified mounted on the center rod and contacting the spring), the bearing outside diameter being greater than the coil inside diameter."

Claim 35, as amended, states:

35. A system for providing displacement or velocity information, comprising an array of sensors, each said sensor capable of providing a measurement of at least one from the group consisting of displacement and velocity, wherein said sensors are on center to center spacing of less than 3mm, wherein each said sensor includes a housing holding a coil, a captive core, and a **plurality of bearings**, wherein said bearings are for supporting said captive core, further wherein said coil has an axis extending in a first direction, wherein said coil has a coil inside diameter, wherein said captive core extends into said coil, wherein each said bearing has a bearing outside diameter that is greater than said coil inside diameter, wherein said captive core has a stroke length, wherein each said bearing has a **length-of-contact in said first direction with a surface capable of movement in said first direction relative to said bearing that is less than said stroke length.**

Applicant would respectfully ask the ask the Examiner to consider, first that Baresh has only a single bearing, which is the large cylindrical bearing in the cross section of FIG. 3 that has a U shape and that is mounted on and moves with the captive core and slides along the inside of the cylindrical housing. Two other structures connected to the housing of Baresh have holes in them, allowing shaft 78 to pass through them, but neither of these is a bearing. The one on the left serves as a spring stop and the one on the

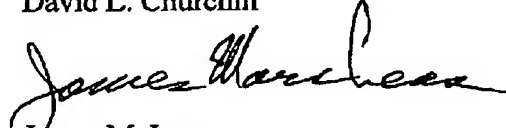
right stops the large bearing and the spring from falling out of the housing. Baresh teaches against either of these being a bearing by providing the single large cylindrical bearing. Second, this large bearing has a length of contact with the inside of the cylindrical housing that is greater than the stroke length, contradicting another limit in claim 35, as amended. Thus, claim 35, as amended, clearly distinguishes from the teachings and suggestions of Baresh. Therefore, the rejection of claim 35 under 35 U.S.C. § 103(a), as being unpatentable over Baresh has been traversed.

New claims 37-47 are dependent on claims 1, 28, and 35. New independent claim 48 is similar to independent claim 35 but, like claims 1 and 28, describes a single device rather than an array of devices.

It is believed that the claims are in condition for allowance. Therefore, applicant respectfully requests favorable reconsideration. If there are any questions please call applicant's attorney at 802 864-1575.

Respectfully submitted,

For: David L. Churchill

By: 
James M. Leas
Registration Number 34,372
Tel: (802) 864-1575

James M. Leas
37 Butler Drive
S. Burlington, Vermont 0540